

Mr. Michael T. Davis  
Algebra II Delta & Eta

Quiz 1 Unit III – Exponential Fundamentals  
January 14, 2015

41 pts

Name:

Mr. Davis Solution Key

Simplify each expression. Give each answer without negative exponents.

1pt 1.  $\frac{x^{11}}{x^4} = x^7$

1pt 2.  $\frac{p^5}{p^{12}} = \frac{1}{p^7}$

1pt 3.  $y^{-3} = \frac{1}{y^3}$

2pt 4.  $17w^{-5} = \frac{17}{w^5}$

2pt 5.  $8^{-1}k^4 = \frac{k^4}{8}$

2pt 6.  $(7m^3)^2 = 7^2m^6$   
 $= 49m^6$

3pt 7.  $(3a^{-4})^{-3} = 3^{-3}a^{12}$   
 $= \frac{a^{12}}{27}$

2pt 8.  $3r \cdot 8r^3 = 24r^4$

3pt 9.  $mn^3 \cdot 10n^2m^6 =$   
 $10m^7n^5$

<p>4pt 10. <math>5k^{-5}p^7 \cdot 2^3k^8p^{-7} =</math></p> <p><math>5 \cdot 8 k^3 p^0</math></p> <p><math>40k^3</math></p>	<p>5pt 11. <math>(3v^3)^4 \cdot (5v^5)^2 \cdot v =</math></p> <p><math>3^4 v^{12} \cdot 5^2 v^{10} \cdot v</math></p> <p><math>81 v^{12} \cdot 25 v^{11}</math></p> <p><math>2025 v^{23}</math></p>	<p>3pt 12. <math>2 \cdot 6^2 + 3 \cdot 4^3 =</math></p> <p><math>2 \cdot 36 + 3 \cdot 64</math></p> <p><math>72 + 192</math></p> <p><math>264</math></p>
<p>1pt 13. <math>(13t^9h^{-11})^0 = 1</math></p>	<p>3pt 14. <math>\frac{3^{10}}{3^8} + \frac{2^6}{2^7} =</math></p> <p><math>3^2 + \frac{1}{2}</math></p> <p><math>9\frac{1}{2}</math></p>	<p>2pt 15. <math>\frac{a^{-6}}{a^{-4}} = \frac{1}{a^{-4}a^6}</math></p> <p><math>= \frac{1}{a^2}</math></p>
<p>2pt 16. <math>\frac{y^3z}{z^5y} = \frac{y^2}{z^4}</math></p>	<p>3pt 17. <math>\frac{36m^{-4}n^{-6}}{28n^{-8}m^{-1}} =</math></p> <p><math>\frac{9n^{-6}n^8}{7m^{-4}m^1}</math></p> <p><math>\frac{9n^2}{7m^3}</math></p>	<p>2pt 18. <math>2 \cdot 2^4 + 2 \cdot 2^{-5} =</math></p> <p><math>2 \cdot 16 + 2^{-4}</math></p> <p><math>32 + \frac{1}{2^4}</math></p> <p><math>32\frac{1}{16}</math></p>